

# Treatment of Dysautonomia in the Joint Hypermobility Syndrome

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# Causes of Dysautonomia

- **Primary:** Idiopathic
  
- **Secondary:**
  - A.- Autonomous Nervous System:
    - a) Chronic polyneuropathies (Diabetes, Amyloidosis, uremia).  
Thiamine deficiency. Chronic alcoholism.  
Other toxic, hereditary or inflammatory diseases.
    - b) Acute polyneuropathies (Guillen-Barre, Porfira).
    - c) Other diseases of the Nervous System (Multiple sclerosis, encephalic or hypothalamic lesions, infections).  
Dysautonomia of Ehlers-Danlos Syndrome, Familial Dyusautonomia.)
  
  - B.- Spinal cord injury.
  
  - C.- Medications: especially cardiovascular and antidepressants.
  
  - D.- Other diseases (see next slide).

Ref.: Modified from Alter JB. Textbook of Internal Medicine. William N. Kelly. 3th ed. 1997.

# Causes of Dysautonomia (cont.)

## Other diseases:

- Chronic diseases.
- Depression.
- Chronic Fatigue Syndrome.  
Rowe found that 60% of patients with CFS had Joint Hypermobility (JH) compared to 24% in controls <sup>1</sup>.
- Fibromyalgia.  
Oflougu noted that 64% of adults had JH <sup>2</sup>.
- **Joint Hypermobility Syndrome.**  
Is the most frequent cause of Dysautonomia seen by rheumatologists.

Ref.: 1.- J Pediatr 2002; 141:421-25.  
2.- Clin Rheumatol 2005; 16;1-3.

# Dysautonomia

There are two causes for Dysautonomia in JHS:

- Autonomic Nervous System dysfunction, characterized by:
  - Orthostatic hypotension or POTS (tachycardia).
  - Symptoms: Palpitations, lightheadiness, tiredness, dizziness, somnolence, poor thermostat regulation, chronic fatigue, pre-syncope or syncope.
- Increased venous pool derived from collagen weakness of the venous wall.

Since physicians believe that low blood pressure is normal, Dysautonomia frequently goes undiagnosed. These patients with low blood pressure, usually have a poor quality of life.

# Graphic representation of Dysautonomia






## The following conditions can aggravate Dysautonomia

- Dehydration.
- Hot and prolonged baths.
- High altitude.
- Standing for too long.
- Getting up suddenly from a bed or a chair (as in church).
- Reaction to closed spaces (Claustrophobia).
- The sight of blood.
- A big scare.
- Severe pain, associated to anxiety, like when having and inyection.

## The following conditions can aggravate Dysautonomia (Cont.)

- Strong emotion.
  - Anxiety, as when taking an exam.
  - Walking slowly, like in Shopping Malls.
  - Medications that can cause orthostatic hypotension.
  - A big meal, specially carbohydrates and alcohol.
  - Acute anemia.
  - Menstrual periods.
  - Pregnancy.
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# Treatment of Dysautonomia

*A.- General Measures*

*B.- Medications:*

*a.- To increase blood pressure*

*b.- Antidepressants*

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## General measures to treat Dysautonomia

- Avoid standing for too long, without moving the feet.
- Avoid walking slowly.
- When sitting for too long is necessary to move hands, feet and knees frequently and to get up and walk.
- Rest for 15 to 30 minutes after lunch or when too tired.
- Drink 2 to 3 liters of fluids a day.
- Add 6 to 9 grams of salt a day (if there are no contraindications).
- Use elastic stockings.
- Practice Yoga, Pilates, Tai Chi or moderate aerobic exercise.

# Medications to treat Dysautonomia

## A.- Mineralocorticoid:

Fludrocortisone

0.1 mg tablets.

Effect lasts 24 yo 36 hours

## B.- Beta adrenergic blocker:

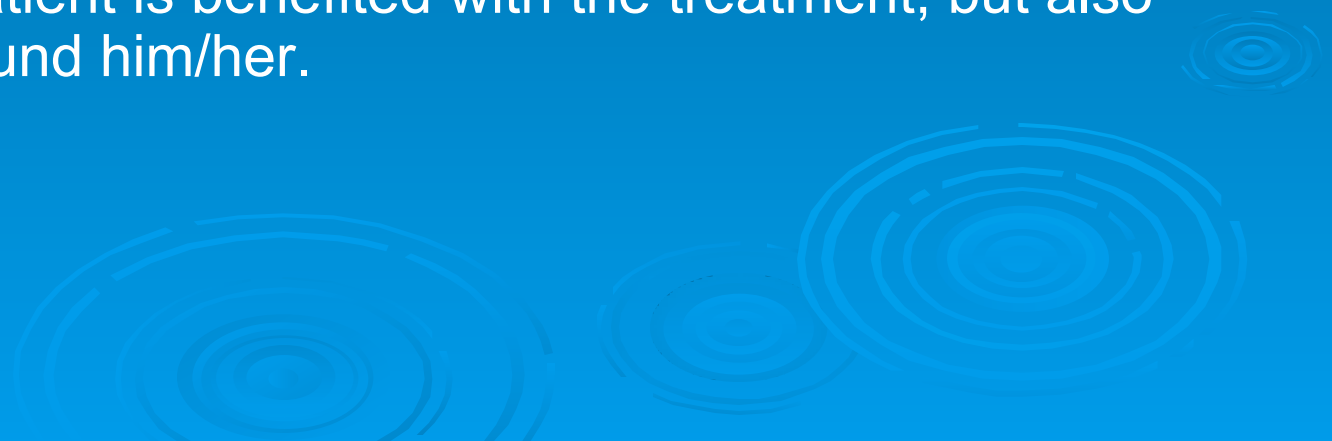
Midodrine

2.5 and 5 mg tablets

Effect lasts only 4 hours

Propranolol is used in cases of POTS (Postural Orthostatic Tachycardia).

## Special considerations

- Dysautonomia is very frequent and causes poor quality of life, at times for years.
  - The treatment of Dysautonomia is very effective, the problem is that Dysautonomia is usually overlooked. Adolescents feel much better and improve their grades at school.
  - Not only the patient is benefited with the treatment, but also the people around him/her.
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## Special considerations (cont.)

- The diagnosis is usually made in adolescent or young females, with time, people end up believing that tiredness is a part of themselves ...
- Most patients do not have syncopal episodes. The ones that do, seek medical attention, but the condition is seldom diagnosed and they get multiple exams and see multiple specialists without getting the proper diagnosis and treatment.
- Hypertensive patients can have Dysautonomia, but the treatment gets more complicated.